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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|---------------------------------|---------------------|------------------|
| 10/598,141 | 01/16/2007 | Christopher John Andrew Barnado | 24963-0010 | 1546 |

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| EXAMINER |
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FRIEDHOFER, MICHAEL A

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| ART UNIT | PAPER NUMBER |
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2832

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| MAIL DATE | DELIVERY MODE |
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11/01/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|------------------------|----------------------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/598,141 | BARNADO, CHRISTOPHER JOHN ANDREW | |
| | Examiner | Art Unit | |
| | Michael A. Friedhofer | 2832 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 3,11-13 and 21-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 3,11-13 and 21-29 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>8/18/06 & 11/01/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the contact layer being held relative to the circuit layer at its edges so as to prevent it slipping sideways away from the circuit layer and the circuit layer and the contact layer are held together around their peripheries, but not secured over their facing areas must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 3, 11-13; 22-25, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zukowski in view of Deguchi.

Zukowski discloses in the figures a push or button switch comprising an underlying circuit layer 7 carrying a circuit 8,9 broken by a gap; a resiliently deformable contact layer 3 having a conductive bridge 4 on a surface thereof and mounted such that the bridge portion is aligned with the gap so as to be resiliently pushed into operative contact with the circuit layer; spacing means 5; and an electroluminescent display layer 2 positioned above the contact layer. The switch is arranged such that a force exerted on the contact layer through the electroluminescent display layer operates the switch. The spacer means forms a peripheral ridge extending all around the bridge portion forming a perimeter to that area of the layer. The contact layer is held relative to the circuit layer at its edges so as to prevent it slipping sideways away from the circuit layer. The switches are utilized in an array of switches sharing a single common circuit layer and a single common contact layer.

Zukowski does not disclose the spacing means being integral with one or the other of the contact layer and circuit layer.

Deguchi teaches a push or button switch including an underlying circuit layer 6 carrying a circuit 8 being broken by a gap; a resilient-deformable contact layer 5 having a conductive bridge portion 9 on a surface thereof; and spacing means 5a keeping the two layers apart in the absence of any applied force pushing them together, in which the spacing means is integral with the contact layer. The contact layer and the spacing means are formed during the molding process.

It would have been obvious to one of ordinary skill in the art to apply the teachings of Deguchi to Zukowski to form the spacer means integral with contact layer because this would be for the purpose of reducing the number of parts and manufacturing steps while providing the same function and purpose for the switch.

4. Claims 20, 21, 26, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zukowski in view of Deguchi as applied to claims 3, 11-13, 22-25, 27, and 28 above, and further in view of Epperson.

Zukowski as modified by Deguchi discloses all of the claimed limitations with the exception of the circuit layer and the contact layer being held together around their peripheries, but are not secured over their facing areas nor that the spacing means is formed by printing one or more bumps, dents, or ridges.

Epperson discloses a switch formed by two layers joined at their peripheries. The spacing is provided by a plurality of bumps formed onto the contact layer via printing.

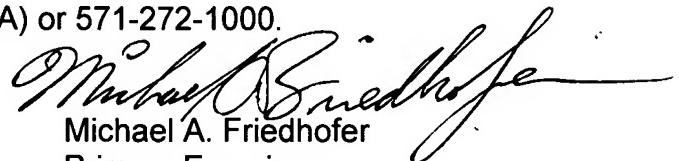
It would have been obvious to one of ordinary skill in the art to apply the teachings of Epperson to Zukowski as modified by Deguchi to form the spacers by printing a plurality of bumps on the contact layer because this is for the purpose of maintaining a minimum of manufacturing steps and reducing the amount of adhesive necessary to join the two layers of the switch.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sado, Hoffmann, Saito et al, Hanahara et al, Lin, Schmiz et al, Kim and Marcus et al teach various switch panels having el layers attached.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Friedhofer whose telephone number is 571-272-1992. The examiner can normally be reached on Mon-Fri 6:00 - 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Michael A. Friedhofer
Primary Examiner
Art Unit 2832

maf